What is claimed is:

1. A nitride semiconductor device comprising:

a substrate that exhibits cleavage;

a nitride semiconductor layer including a cleavage plane equal to a cleavage plane of the substrate and formed out of a compound containing a group III element and nitrogen;

a stripe-shaped optical waveguide formed in the nitride semiconductor layer;

a cavity formed by cleaved end surfaces of the nitride semiconductor layer and the stripe-shaped optical waveguide; and

a cleavage guide groove formed, to help form the end surfaces, in a top surface of the nitride semiconductor layer from above elsewhere than right above the stripe-shaped optical waveguide, the cleavage guide groove reaching the substrate.

2. A nitride semiconductor device as claimed in claim 1,

wherein the substrate is a nitride semiconductor substrate formed out of a compound containing a group III element and nitrogen.

3 A nitride semiconductor device as claimed in claim 1,

wherein a depth d from a top surface of the nitride semiconductor device to a bottom of the cleavage guide groove is within a range $1 \leq d \leq 10$ μm.

4. A nitride semiconductor device as claimed in claim 3,

wherein, when the nitride semiconductor device is viewed in a two-dimensional projection with the nitride semiconductor substrate down, the cleavage guide groove is formed at least 50 μm away from the stripe-shaped optical waveguide in a direction

perpendicular to the stripe-shaped optical waveguide.

5. A nitride semiconductor device as claimed in claim 1,

wherein a depth d from an interface between the substrate and the nitride semiconductor layer to a bottom of the cleavage guide groove is within a range $1 \leq d \leq 10$ μm.

6. A nitride semiconductor device as claimed in claim 5,

wherein, when the nitride semiconductor device is viewed in a two-dimensional projection with the nitride semiconductor substrate down, the cleavage guide groove is formed at least 50 μm away from the stripe-shaped optical waveguide in a direction perpendicular to the stripe-shaped optical waveguide.

7. A nitride semiconductor device as claimed in claim 1,

wherein, when the nitride semiconductor device is viewed in a two-dimensional projection with the nitride semiconductor substrate down, the cleavage guide groove is formed at least 50 μm away from the stripe-shaped optical waveguide in a direction perpendicular to the stripe-shaped optical waveguide.

8. A nitride semiconductor device as claimed in claim 1,

wherein, when the nitride semiconductor device is viewed in a two-dimensional projection with the nitride semiconductor substrate down, the cleavage guide groove is formed at least 100 μm away from the stripe-shaped optical waveguide in a direction perpendicular to the stripe-shaped optical waveguide.

9. A nitride semiconductor device as claimed in claim 1,

wherein the nitride semiconductor device has a thickness within a range from 80 to 160 μm.

10. A nitride semiconductor device as claimed in claim 1, further comprising:

a cleavage assist groove formed in a bottom surface of the substrate from below.

11. A nitride semiconductor device as claimed in claim 10,

wherein the substrate is a nitride semiconductor substrate formed out of a compound containing a group III element and nitrogen.

12 A nitride semiconductor device as claimed in claim 10,

wherein a depth d from a top surface of the nitride semiconductor device to a bottom of the cleavage guide groove is within a range $1 \leq d \leq 10$ μm.

13. A nitride semiconductor device as claimed in claim 12,

wherein, when the nitride semiconductor device is viewed in a two-dimensional projection with the nitride semiconductor substrate down, the cleavage guide groove is formed at least 50 μm away from the stripe-shaped optical waveguide in a direction perpendicular to the stripe-shaped optical waveguide.

14. A nitride semiconductor device as claimed in claim 10,

wherein a depth d from an interface between the substrate and the nitride semiconductor layer to a bottom of the cleavage guide groove is within a range $1 \leq d \leq 10$ μm.

15. A nitride semiconductor device as claimed in claim 14,

wherein, when the nitride semiconductor device is viewed in a two-dimensional projection with the nitride semiconductor substrate down, the cleavage guide groove is formed at least 50 μm away from the stripe-shaped optical waveguide in a direction perpendicular to the stripe-shaped optical waveguide.

16. A nitride semiconductor device as claimed in claim 10,

wherein, when the nitride semiconductor device is viewed in a two-dimensional projection with the nitride semiconductor substrate down, the cleavage guide groove is formed at least 50 μm away from the stripe-shaped optical waveguide in a direction perpendicular to the stripe-shaped optical waveguide.

17. A nitride semiconductor device as claimed in claim 10,

wherein, when the nitride semiconductor device is viewed in a two-dimensional projection with the nitride semiconductor substrate down, the cleavage guide groove is formed at least 100 μm away from the stripe-shaped optical waveguide in a direction perpendicular to the stripe-shaped optical waveguide.

18. A nitride semiconductor device as claimed in claim 10,

wherein the nitride semiconductor device has a thickness within a range from 80 to 160 μm.

19. A nitride semiconductor device comprising:

a substrate that exhibits cleavage;

a nitride semiconductor layer deposited on the substrate, including a cleavage plane equal to a cleavage plane of the substrate, and formed out of a compound containing a group III element and nitrogen;

a stripe-shaped optical waveguide formed in the nitride semiconductor layer;

a cavity formed by cleaved end surfaces of the nitride semiconductor layer and the stripe-shaped optical waveguide; and

a cleavage guide groove formed, to help form the end surfaces, in a bottom surface of the substrate from below elsewhere than right below the stripe-shaped optical waveguide.

20. A nitride semiconductor device as claimed in claim 19,

wherein the substrate is a nitride semiconductor substrate formed out of a compound containing a group III element and nitrogen.

21 A nitride semiconductor device as claimed in claim 19,

wherein a depth d from a bottom surface of the nitride semiconductor device to a bottom of the cleavage guide groove is within a range $1 \leq d \leq 10$ μm.

22. A nitride semiconductor device as claimed in claim 21,

wherein, when the nitride semiconductor device is viewed in a two-dimensional projection with the nitride semiconductor substrate down, the cleavage guide groove is formed at least 50 μm away from the stripe-shaped optical waveguide in a direction perpendicular to the stripe-shaped optical waveguide.

23. A nitride semiconductor device as claimed in claim 19,

wherein, when the nitride semiconductor device is viewed in a two-dimensional projection with the nitride semiconductor substrate down, the cleavage guide groove is formed at least 50 μm away from the stripe-shaped optical waveguide in a direction perpendicular to the stripe-shaped optical waveguide.

24. A nitride semiconductor device as claimed in claim 19,

wherein, when the nitride semiconductor device is viewed in a two-dimensional projection with the nitride semiconductor substrate down, the cleavage guide groove is formed at least 100 μm away from the stripe-shaped optical waveguide in a direction perpendicular to the stripe-shaped optical waveguide.

25. A nitride semiconductor device as claimed in claim 19,

wherein the nitride semiconductor device has a thickness within a range from 80 to 160 μm.

26. A method of fabricating a nitride semiconductor device, comprising the steps of:

adjusting to within a range from 80 to 160 μm a thickness of a nitride semiconductor wafer formed by depositing on a substrate that exhibits cleavage a nitride semiconductor layer formed out of a compound containing a group III element and nitrogen and including a cleavage plane equal to a cleavage plane of the substrate, with a plurality of stripe-shaped optical waveguides formed at equal intervals in the nitride semiconductor layer;

forming a plurality of cleavage guide grooves in a shape of discontinuous broken lines

in a top surface of the nitride semiconductor wafer by scribing from above the nitride semiconductor layer in such a way that the cleavage guide grooves reach the substrate; and

cleaving the nitride semiconductor wafer along the cleavage guide grooves,

wherein the cleavage guide grooves are formed elsewhere than right above the stripe-shaped optical waveguides.

27. A method of fabricating a nitride semiconductor device as claimed in claim 26, wherein the substrate is a nitride semiconductor substrate formed out of a compound containing a group III element and nitrogen.

28. A method of fabricating a nitride semiconductor device as claimed in claim 26, wherein a depth d from the top surface of the nitride semiconductor wafer to bottoms of the cleavage guide grooves is within a range $1 \leq d \leq 10$ μm.

29. A method of fabricating a nitride semiconductor device as claimed in claim 28, wherein the cleavage guide grooves are formed with intervals of 1mm or shorter left between every two adjacent ones thereof on a same broken line.

30. A method of fabricating a nitride semiconductor device as claimed in claim 28, wherein the cleavage guide grooves are formed in every interval between the stripe-shaped optical waveguides on a same broken line.

31. A method of fabricating a nitride semiconductor device as claimed in claim 28, wherein each stroke of the cleavage guide grooves is formed in a shape of a

continuous solid line.

32. A method of fabricating a nitride semiconductor device as claimed in claim 28, wherein each stroke of the cleavage guide grooves is formed in a shape of a discontinuous broken line.

33. A method of fabricating a nitride semiconductor device as claimed in claim 26, wherein a depth d from an interface between the nitride semiconductor substrate and the nitride semiconductor layer to bottoms of the cleavage guide grooves is within a range $1 \leq d \leq 10$ μm.

34. A method of fabricating a nitride semiconductor device as claimed in claim 33, wherein the cleavage guide grooves are formed with intervals of 1mm or shorter left between every two adjacent ones thereof on a same broken line.

35. A method of fabricating a nitride semiconductor device as claimed in claim 33, wherein the cleavage guide grooves are formed in every interval between the stripe-shaped optical waveguides on a same broken line.

36. A method of fabricating a nitride semiconductor device as claimed in claim 33, wherein each stroke of the cleavage guide grooves is formed in a shape of a continuous solid line.

37. A method of fabricating a nitride semiconductor device as claimed in claim 33,

shaped optical waveguides on a same broken line.

42. A method of fabricating a nitride semiconductor device as claimed in claim 39, wherein each stroke of the cleavage guide grooves is formed in a shape of a continuous solid line.

43. A method of fabricating a nitride semiconductor device as claimed in claim 39, wherein each stroke of the cleavage guide grooves is formed in a shape of a discontinuous broken line.

44 A method of fabricating a nitride semiconductor device as claimed in claim 38, wherein a depth d from the interface between the nitride semiconductor substrate and the nitride semiconductor layer to a deepest end of the cleavage guide grooves is within a range $1 \leq d \leq 10$ μm.

45. A method of fabricating a nitride semiconductor device as claimed in claim 44, wherein the cleavage guide grooves are formed with intervals of 1mm or shorter left between every two adjacent ones thereof on a same broken line.

46. A method of fabricating a nitride semiconductor device as claimed in claim 44, wherein the cleavage guide grooves are formed in every interval between the stripe-shaped optical waveguides on a same broken line.

47. A method of fabricating a nitride semiconductor device as claimed in claim 44,

wherein each stroke of the cleavage guide grooves is formed in a shape of a continuous solid line.

48. A method of fabricating a nitride semiconductor device as claimed in claim 44, wherein each stroke of the cleavage guide grooves is formed in a shape of a discontinuous broken line.

49. A method of fabricating a nitride semiconductor device as claimed in claim 26, further comprising the step of:

before the step of cleaving the nitride semiconductor wafer, forming cleavage assist grooves in a bottom surface of the nitride semiconductor wafer by scribing from below the nitride semiconductor substrate,

wherein the cleavage guide grooves and the cleavage assist grooves are so formed that the cleavage guide grooves are located along center axes of the cleavage assist grooves.

50. A method of fabricating a nitride semiconductor device as claimed in claim 49, wherein the substrate is a nitride semiconductor substrate formed out of a compound containing a group III element and nitrogen.

51. A method of fabricating a nitride semiconductor device as claimed in claim 49, wherein a depth d from the top surface of the nitride semiconductor wafer to a deepest end of the cleavage guide grooves is within a range $1 \leq d \leq 10$ μm.

52. A method of fabricating a nitride semiconductor device as claimed in claim 51,

wherein the cleavage guide grooves are formed with intervals of 1mm or shorter left between every two adjacent ones thereof on a same broken line.

53. A method of fabricating a nitride semiconductor device as claimed in claim 51, wherein the cleavage guide grooves are formed in every interval between the stripe-shaped optical waveguides on a same broken line.

54. A method of fabricating a nitride semiconductor device as claimed in claim 51, wherein each stroke of the cleavage guide grooves is formed in a shape of a continuous solid line.

55. A method of fabricating a nitride semiconductor device as claimed in claim 51, wherein each stroke of the cleavage guide grooves is formed in a shape of a discontinuous broken line.

56. A method of fabricating a nitride semiconductor device as claimed in claim 49, wherein a depth d from an interface between the nitride semiconductor substrate and the nitride semiconductor layer to a deepest end of the cleavage guide grooves is within a range $1 \leq d \leq 10$ μm.

57. A method of fabricating a nitride semiconductor device as claimed in claim 56, wherein the cleavage guide grooves are formed with intervals of 1mm or shorter left between every two adjacent ones thereof on a same broken line.

58. A method of fabricating a nitride semiconductor device as claimed in claim 56, wherein the cleavage guide grooves are formed in every interval between the stripe-shaped optical waveguides on a same broken line.

59. A method of fabricating a nitride semiconductor device as claimed in claim 56, wherein each stroke of the cleavage guide grooves is formed in a shape of a continuous solid line.

60. A method of fabricating a nitride semiconductor device as claimed in claim 56, wherein each stroke of the cleavage guide grooves is formed in a shape of a discontinuous broken line.

61. A method of fabricating a nitride semiconductor device as claimed in claim 49, wherein, when a semiconductor layer of a material that cleaves in a different direction from the nitride semiconductor is formed at an interface between the nitride semiconductor layer and the substrate,

first a plurality of cleavage assist grooves are formed in a shape of discontinuous broken lines in a top surface of the nitride semiconductor layer to a depth reaching half a thickness of the nitride semiconductor layer by scribing from above the top surface of the nitride semiconductor layer, and

then the cleavage guide grooves are formed by scribing from bottom surfaces of the cleavage assist grooves.

62. A method of fabricating a nitride semiconductor device as claimed in claim 61,

wherein a depth d from the top surface of the nitride semiconductor wafer to a deepest end of the cleavage guide grooves is within a range $1 \leq d \leq 10$ μm.

63. A method of fabricating a nitride semiconductor device as claimed in claim 62, wherein the cleavage guide grooves are formed with intervals of 1mm or shorter left between every two adjacent ones thereof on a same broken line.

64. A method of fabricating a nitride semiconductor device as claimed in claim 62, wherein the cleavage guide grooves are formed in every interval between the stripe-shaped optical waveguides on a same broken line.

65. A method of fabricating a nitride semiconductor device as claimed in claim 62, wherein each stroke of the cleavage guide grooves is formed in a shape of a continuous solid line.

66. A method of fabricating a nitride semiconductor device as claimed in claim 62, wherein each stroke of the cleavage guide grooves is formed in a shape of a discontinuous broken line.

67. A method of fabricating a nitride semiconductor device as claimed in claim 61, wherein a depth d from the interface between the nitride semiconductor substrate and the nitride semiconductor layer to a deepest end of the cleavage guide grooves is within a range $1 \leq d \leq 10$ μm.

68. A method of fabricating a nitride semiconductor device as claimed in claim 67, wherein the cleavage guide grooves are formed with intervals of 1mm or shorter left between every two adjacent ones thereof on a same broken line.

69. A method of fabricating a nitride semiconductor device as claimed in claim 67, wherein the cleavage guide grooves are formed in every interval between the stripe-shaped optical waveguides on a same broken line.

70. A method of fabricating a nitride semiconductor device as claimed in claim 67, wherein each stroke of the cleavage guide grooves is formed in a shape of a continuous solid line.

71. A method of fabricating a nitride semiconductor device as claimed in claim 67, wherein each stroke of the cleavage guide grooves is formed in a shape of a discontinuous broken line.

72. A method of fabricating a nitride semiconductor device as claimed in claim 26, wherein the cleavage guide grooves are formed with intervals of 1mm or shorter left between every two adjacent ones thereof on a same broken line.

73. A method of fabricating a nitride semiconductor device as claimed in claim 26, wherein the cleavage guide grooves are formed in every interval between the stripe-shaped optical waveguides on a same broken line.

74. A method of fabricating a nitride semiconductor device as claimed in claim 26, wherein each stroke of the cleavage guide grooves is formed in a shape of a continuous solid line.

75. A method of fabricating a nitride semiconductor device as claimed in claim 26, wherein each stroke of the cleavage guide grooves is formed in a shape of a discontinuous broken line.

76. A method of fabricating a nitride semiconductor device, comprising the steps of:

adjusting to within a range from 80 to 160 μm a thickness of a nitride semiconductor wafer formed by depositing on a substrate that exhibits cleavage a nitride semiconductor layer formed out of a compound containing a group III element and nitrogen and including a cleavage plane equal to a cleavage plane of the substrate, with a plurality of stripe-shaped optical waveguides formed at equal intervals in the nitride semiconductor layer;

forming a plurality of cleavage guide grooves in a shape of discontinuous broken lines in a bottom surface of the nitride semiconductor wafer by scribing from below the substrate; and

cleaving the nitride semiconductor wafer along the cleavage guide grooves,

wherein the cleavage guide grooves are formed elsewhere than right below the stripe-shaped optical waveguides.

77. A method of fabricating a nitride semiconductor device as claimed in claim 76, wherein the substrate is a nitride semiconductor substrate formed out of a compound

containing a group III element and nitrogen.

78. A method of fabricating a nitride semiconductor device as claimed in claim 76, wherein a depth d from the bottom surface of the nitride semiconductor wafer to a deepest end of the cleavage guide grooves is within a range $1 \leq d \leq 10$ μm.

79. A method of fabricating a nitride semiconductor device as claimed in claim 78, wherein the cleavage guide grooves are formed with intervals of 1mm or shorter left between every two adjacent ones thereof on a same broken line.

80. A method of fabricating a nitride semiconductor device as claimed in claim 78, wherein the cleavage guide grooves are formed in every interval between the stripe-shaped optical waveguides on a same broken line.

81. A method of fabricating a nitride semiconductor device as claimed in claim 78, wherein each stroke of the cleavage guide grooves is formed in a shape of a continuous solid line.

82. A method of fabricating a nitride semiconductor device as claimed in claim 78, wherein each stroke of the cleavage guide grooves is formed in a shape of a discontinuous broken line.

83. A method of fabricating a nitride semiconductor device as claimed in claim 76, wherein the cleavage guide grooves are formed with intervals of 1mm or shorter left

between every two adjacent ones thereof on a same broken line.

84. A method of fabricating a nitride semiconductor device as claimed in claim 76, wherein the cleavage guide grooves are formed in every interval between the stripe-shaped optical waveguides on a same broken line.

85. A method of fabricating a nitride semiconductor device as claimed in claim 76, wherein each stroke of the cleavage guide grooves is formed in a shape of a continuous solid line.

86. A method of fabricating a nitride semiconductor device as claimed in claim 76, wherein each stroke of the cleavage guide grooves is formed in a shape of a discontinuous broken line.